

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q78133

Keisuke KII, et al.

Appln. No.: 10/698,438

Group Art Unit: 1794

Confirmation No.: 2685

Examiner: Victor S. CHANG

Filed: November 3, 2003

For: PARTIALLY CROSSLINKED ADHESIVE-SUPPORTED POROUS FILM FOR BATTERY  
SEPARATOR AND ITS USE

**SUBMISSION OF APPEAL BRIEF**

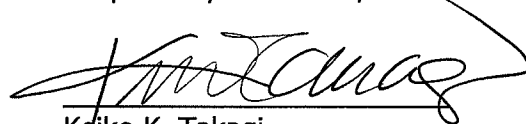
**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. The USPTO is directed and authorized to charge the statutory fee of \$540.00 and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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**65565**

CUSTOMER NUMBER

Date: June 12, 2009

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SEPARATOR AND ITS USE

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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**I. REAL PARTY IN INTEREST**

The real party in interest is Nitto Denko Corporation.

**II. RELATED APPEALS AND INTERFERENCES**

Appellants, Appellants' legal representative and the Assignee of this application are not aware of any other appeals or interferences that will directly affect, or be affected by, or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 1-19 are pending in the application.

Claims 1, 2, 4, 6, 7, and 8 are rejected and claims 3, 5 and 9-19 are withdrawn from consideration.

This is an appeal from the Examiner's rejections of claims 1, 2, 4, 6, 7, and 8 under 35 U.S.C. § 102(b) and 103(a).

**IV. STATUS OF AMENDMENTS**

The Amendment under 37 C.F.R. § 1.111 submitted on August 7, 2008, is the last response submitted with amendments to the claims of the application. A Notice of Non-Compliant Amendment was issued on August 18, 2008 and a Response to the Notice was filed on August 22, 2008 renumbering claims 18-20 as claims 17-19. The Amendment filed on August 22, 2008 was entered.

There are no outstanding amendments to the claims or to the specification in the present application.

**V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

Independent claim 1 recites a partially crosslinked adhesive-supported on a porous film for battery separator, consisting essentially of a porous film substrate having supported thereon a partially crosslinked adhesive that is partially crosslinked by preparing a reactive polymer having a functional group in the molecule and capable of being crosslinked upon reaction with a polyfunctional compound having reactivity with the functional group and then reacting the reactive polymer with a polyfunctional compound. *See* page 3, lines 8-14, page 4, lines 6-12, page 5, lines 12-19, page 12, lines 23-27, and Examples of the present specification.

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

An issue on appeal is whether the Examiner improperly finally rejected claims 1, 2, 4, 6 and 8 under 35 U.S.C. §102(b) allegedly being anticipated by JP 10-183085 ("JP '085").

An issue on appeal is whether the Examiner improperly finally rejected claim 7 under 35 U.S.C. §103(a) as allegedly being unpatentable over JP '085.



**VII. ARGUMENT**

The rejection of claims 1, 2, 4, 6 and 8 under 35 U.S.C. §102(b) as allegedly being anticipated by JP 10-183085 ("JP '085") and the rejection of claim 7 under 35 U.S.C. §103(a) as allegedly being unpatentable over JP '085 should be reversed because JP '085 does not disclose the claimed invention.

Independent claim 1 is directed to a partially crosslinked adhesive-supported on a porous film for battery separator, consisting essentially of a porous film substrate having supported thereon a partially crosslinked adhesive that is partially crosslinked by preparing a reactive polymer having a functional group in the molecule and capable of being crosslinked upon reaction with a polyfunctional compound having reactivity with the functional group and then reacting the reactive polymer with a polyfunctional compound.

It is respectfully submitted that claim 1 recites the transitional phrase "consisting essentially of" and thus, excludes the presence of a tackifier (i.e., binder of JP '085).

Regarding the transitional term "consisting essentially of", the Examiner asserts that Applicants have the burden of showing that the introduction of additional steps or components would materially change the characteristics of Applicants' invention.

It is submitted that Applicants have demonstrated that the presence of a tackifier affects the "basic and novel characteristics" of the claimed invention. In fact, the presence of the binder would have a negative effect on the claimed invention.

In order to demonstrate the negative effect of a tackifier on the claimed invention, a Declaration under 37 C.F.R. § 1.132 was submitted on August 22, 2008. Batteries were

prepared using an electrolyte containing a tackifier and batteries were prepared using an electrolyte that did not containing a tackifier. The batteries using electrolytes containing a tackifier exhibited a faster degradation in discharge capacity as compared to a battery using an electrolyte having no tackifier. Based on this evidence, which can be extrapolated to the claimed battery separator, not only is it unsuitable to use a tackifier in the battery, but also to use a tackifier in the adhesive for a battery separator.

Furthermore, since JP '085 does not disclose or suggest the composition for a battery separator, JP '085 is distinguishable from the present invention.

In this regard, the Examiner asserts that the preamble has not been given patentable weight, because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause.

However, "[i]f the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999). See MPEP § 2111.02. In addition, it is submitted that "any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation" (emphasis added). See MPEP § 2111.02(I).

In this case, the recitation of a battery separator is a structural element recited in the preamble of the claim and this element gives the claim life and meaning.

For example, in *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951), the preamble reciting "[a]n abrasive article" was deemed essential to point out the invention defined by claims to an article comprising abrasive grains and a hardened binder and the process of making it. The court stated "it is only by that phrase that it can be known that the subject matter defined by the claims is comprised as an abrasive article. Every union of substances capable *inter alia* of use as abrasive grains and a binder is not an 'abrasive article.'" Therefore, the preamble served to further define the structure of the article.

Similarly in the present case, it is by the phrase "battery separator" in the present claims that it can be known that the subject matter defined by the claims is comprised as a battery separator and that every union of an adhesive layer and porous film is not a battery separator.

For at least the above reasons, it is submitted that JP '085 does not anticipate claim

1.

Claims 2, 4, 6, 7, and 8 and depend, directly or indirectly, from claim 1, and thus, it is respectfully submitted that these claims are patentable for at least the same reasons as claim

1.

Further, with respect to the official notice taken with respect to the rejection of claim 7, the Examiner asserts that Applicants must specifically point out the supposed errors in the Examiner's Official notice, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art.

It is respectfully submitted that Appellants have continued to point out the errors in the Examiner's Official Notice. The Examiner simply states "that reduced adhesive surface coverage is common and well known, motivated by the desire to adjust the amount of adhesiveness

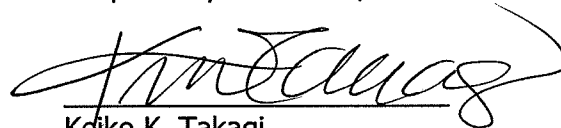
and/or a reduced cost". Appellants submit that, with respect to the function of a battery, it is preferable that the supporting ratio of an adhesive is lower, but rather the contrary is preferable when adhesion to a battery is considered. Thus, the Examiner's statement that reduced surface coverage is common and well known motivated by the desire to adjust the amount of adhesiveness and/or a reduced cost is in error since it is overbroad and generalized.

In addition, official notice unsupported by documentary evidence should only be taken by the Examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. Such is not the case. Further, it is submitted that the Examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge. *See* MPEP § 2144.03.

For at least the above reasons, Appellants respectfully submit that the anticipation and obviousness rejection based on JP '085 should be reversed.

The USPTO is directed and authorized to charge the statutory fee (37 C.F.R. §41.37(a) and 1.17(c)) and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Date: June 12, 2009

**CLAIMS APPENDIX**

CLAIMS 1, 2, 4, 6, 7, and 8 ON APPEAL:

1. A partially crosslinked adhesive-supported on a porous film for battery separator, consisting essentially of a porous film substrate having supported thereon a partially crosslinked adhesive that is partially crosslinked by preparing a reactive polymer having a functional group in the molecule and capable of being crosslinked upon reaction with a polyfunctional compound having reactivity with the functional group and then reacting the reactive polymer with a polyfunctional compound.

2. The partially crosslinked adhesive-supported on a porous film as claimed in claim 1, wherein the partially crosslinked adhesive is partially crosslinked by reacting a reactive polymer having an active hydrogen-containing functional group with a polyfunctional isocyanate compound.

4. The partially crosslinked adhesive-supported on a porous film as claimed in claim 2, wherein the active hydrogen-containing functional group is a hydroxyl group, a carboxyl group, or an amino group.

6. The partially crosslinked adhesive-supported on a porous film as claimed in claim 1, wherein the partially crosslinked adhesive has a gel fraction in the range of from 5 to 99%.

7. The partially crosslinked adhesive-supported on a porous film as claimed in claim 1, wherein the partially crosslinked adhesive is supported on the porous film substrate at a supporting ratio in the range of from 5 to 95%.

8. The partially crosslinked adhesive-supported on a porous film as claimed in any one of claims 1 to 4, wherein the reactive polymer has a glass transition temperature of from  $-30^{\circ}\text{C}$  to  $100^{\circ}\text{C}$ .

**EVIDENCE APPENDIX:**

Pursuant to 37 C.F.R. § 41.37(c)(1)(ix), submitted herewith are copies of any evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 or any other evidence entered by the Examiner and relied upon by Appellant in the appeal.

A Declaration under 37 C.F.R. § 1.132 was submitted on August 22, 2008.

**APPEAL BRIEF**  
**U.S. Application No.: 10/698,438**

**Attorney Docket No.: Q78133**

**RELATED PROCEEDINGS APPENDIX**

Submitted herewith are copies of decisions rendered by a court or the Board in any proceeding identified about in Section II pursuant to 37 C.F.R. § 41.37(c)(1)(ii).

None.